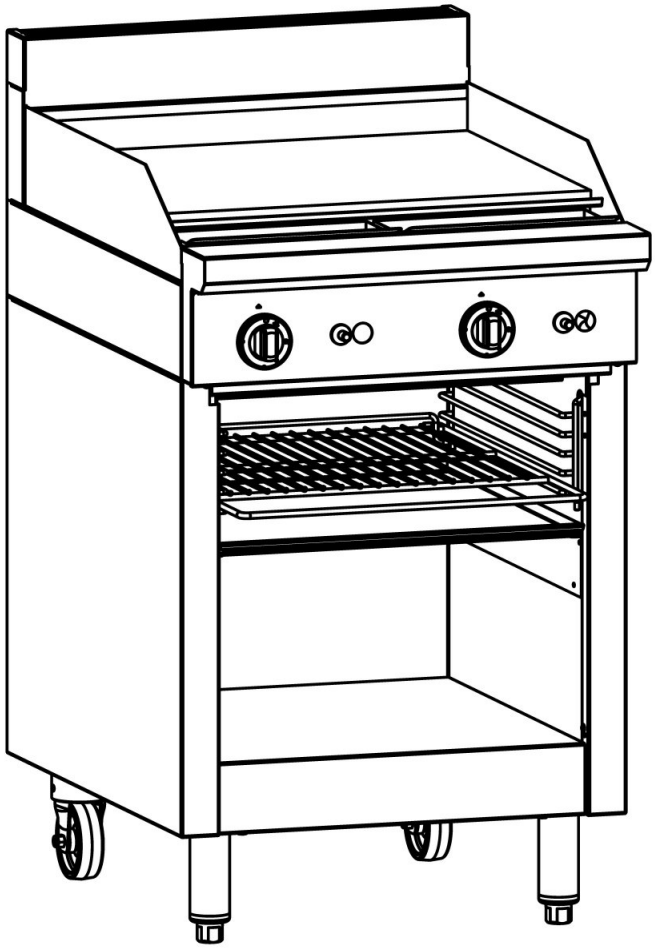
Gas Griddle Toaster

Model CT6

Service Manual



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WARNING:

ALL INSTALLATION AND SERVICE REPAIR WORK MUST BE CARRIED OUT BY QUALIFIED PERSONS ONLY.

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS APPLIANCE.

IMPORTANT: MAKING ALTERATIONS MAY VOID WARRANTIES AND APPROVALS.

This manual is designed to take a more in depth look at the Cobra Series CT6 Gas Griddle Toaster for the purpose of making the units more understandable to service people.

There are settings explained in this manual that should never require to be adjusted, but for completeness and those special cases where these settings are required to change, this manual gives a full explanation as to how, and what effects will result.

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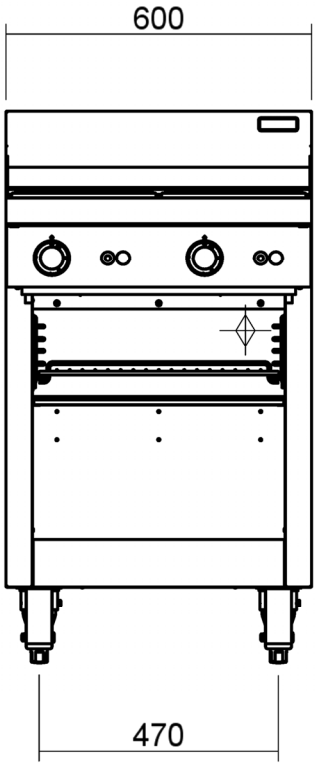
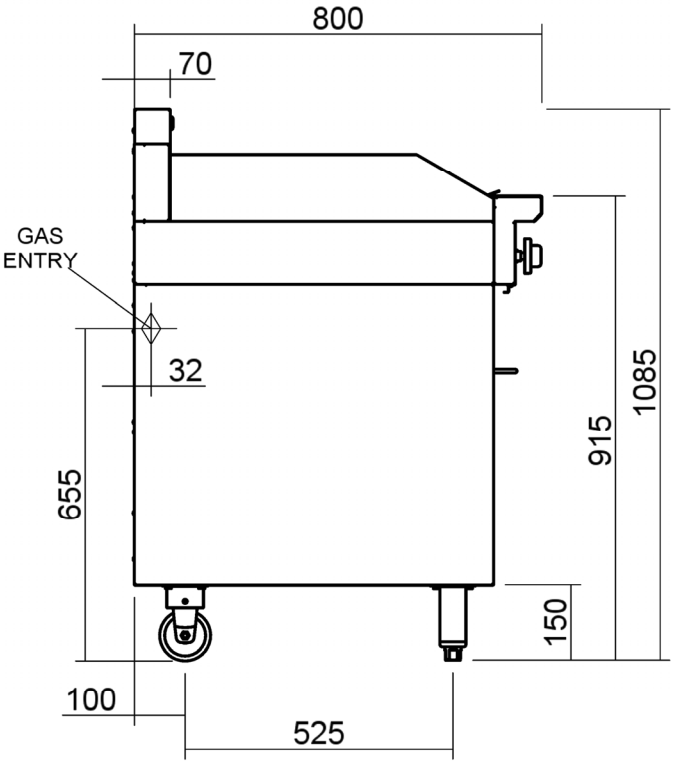
Model Numbers Covered in this Specification

CT6 Gas Griddle Toaster

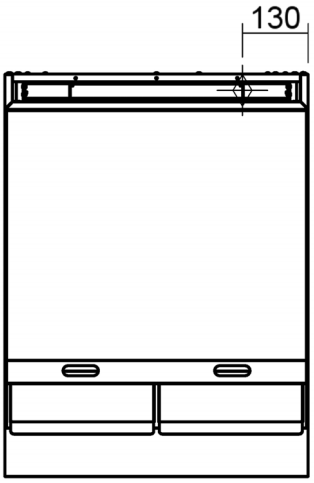
External Dimensions



Front



Side



Plan

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1 Specifications

Gas Supply (Non-UK Models)

	Natural Gas	LP Gas / Butane	Town Gas
Input Rating (N.H.G.C.)	42 MJ/hr	42 MJ/hr	42 MJ/hr
	(39,800 Btu/hr)	(39,800 Btu/hr)	(39,800 Btu/hr)
Supply Pressure	1.13 - 3.40 kPa	2.75 - 4.50 kPa	0.75 - 1.50 kPa
	(4.5" - 13.5" w.c.)	(11" - 18" w.c.)	(3" - 6" w.c.)
Burner Operating Pressure	1.00 kPa (*)	2.50 kPa (*)	0.63 kPa (*)
	(4.0" w.c.)	(10.0" w.c.)	(2.5" w.c.)
Gas Connection	½" BSP Male		

Gas Supply (UK Models)

		Natural Gas (G20)	Propane (G31)
Heat Input (nett)	Nominal	11.0 kW	11.0 kW
	Reduced	6.0 kW	5.6 kW
Gas Rate (nett)	Nominal	1.16 m^3/hr	0.85 kg/hr
	Reduced	0.63 m^3/hr	0.44 kg/hr
Supply Pressure		20 mbar	37 mbar
Burner Operating Pressure		10 mbar (*)	26 mbar (*)
Gas Connection		$^1/_2$" BSP Male	

Injector Sizes

	Natural Gas (G20)	Propane (G31)	Town Gas
Main Burners	2.10mm	1.30mm	3.80mm
Pilot Burners	0.35mm	0.23mm	0.60mm

Griddle Toaster Internal Dimensions

Width	475mm
Depth	570mm
Height	190mm

Griddle Toaster Racks

Toaster Rack Size	472mm x 430mm
Number of Racks Supplied	1

Weight

CT6 (Net Weight)	120 kg

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Installation Requirements

NOTE:

- **It is most important that this appliance is installed correctly and that operation is correct before use. Installation shall comply with local electrical, gas, health and safety requirements.**
- **This appliance shall be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of health harmful substances in the room, the appliance is installed in.**

Cobra Griddle Toasters are designed to provide years of satisfactory service and correct installation is essential to achieve the best performance, efficiency and trouble-free operation.

This appliance must be installed in accordance with National installation codes and in addition, in accordance with relevant National / Local codes covering gas and fire safety.

Australia:	- AS5601	- Gas Installations.
New Zealand:	- NZS5261	- Gas Installation.
United Kingdom:	- Gas Safety (Installation & Use) Regulations 1998.	
	- BS6173	- Installation of Catering Appliances.
	- BS5440	- 1 & 2 Installation Flueing & Ventilation.
Ireland:	- IS 820	- Non Domestic Gas Installations.

Installations must be carried out by qualified service persons only. Failure to install equipment to relevant codes and manufacturers specifications shown in this section will void the warranty.
Components having adjustments protected (e.g. paint sealed) by the manufacturer, are only allowed to be adjusted by a qualified service person. They are not to be adjusted by the installation person.

Unpacking

- Remove all packaging and transit protection from the appliance including all protective plastic coating from the exterior stainless steel panels.
- Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
- Report any deficiencies to the distributor who supplied the appliance.
- Check that the available gas supply is correct to that shown on the rating plate located on the right hand inner side panel.
- Check that the following parts have been supplied with the appliance:

Enamelled Crumb Tray	1.
Toasting Rack	1.
Toasting Rack Tray (St/Steel)	1.
Grease Drawer	1.
Adjustable Legs	4.
Gas Regulator	1.
Alternate Gas Conversion Kit	1.

Location

1. Installation must allow for a sufficient flow of fresh air for the combustion air supply.

Combustion Air Requirements:

Natural Gas (G20)	**10 m³/hr.**
LPG (G31)	**9 m³/hr.**
Town Gas	**10 m³/hr.**

2. Installation must include adequate ventilation means, to prevent dangerous build up of combustion products.
3. Position the appliance in its approximate working position.
4. All air for burner combustion is supplied from underneath the appliance. The legs must always be fitted and no obstructions placed on the underside or around the base of the appliance, as obstructions will cause incorrect operation and / or failure of the appliance.

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5. Components having adjustments protected (e.g. paint sealed) by manufacturer are only to be adjusted by an authorised service agent. They are not to be adjusted by the installation person.

NOTE: Do not obstruct or block the appliances flue. Never directly connect a ventilation system to the appliance flue outlet.

Clearances

NOTE: Only non-combustible materials can be used in close proximity to this appliance.

Any gas burning appliance requires adequate clearance and ventilation for optimum and trouble-free operation. The following minimum installation clearances are to be adhered to:

	Combustible Surface	Non Combustible Surface
Left / Right hand side	50mm	0mm
Rear	50mm	0mm

Assembly

CT6 Model only

This model is delivered completely assembled. No further assembly is required. Ensure that the legs are securely attached.

NOTE:

- **This appliance is fitted with adjustable feet to enable it to be positioned securely and level on uneven floors. This should be carried out on completion of the gas connection. Refer to the 'Gas Connection Section'.**

Gas Connection

NOTE: ALL GAS FITTING MUST ONLY BE CARRIED OUT BY A QUALIFIED SERVICE PERSON.

1. Cobra Gas Griddle Toasters do not require an electrical connection, as they function totally on the gas supply only.
2. It is essential that the gas supply is correct for the appliance to be installed and that adequate supply pressure and volume are available. The following checks should therefore be made before installation:

   a. **Gas Type** the appliance has been supplied for, is shown on coloured stickers located above the gas connection and next to the rating plate. Check that this is correct for the gas supply the appliance is being installed for. The gas conversion procedure is detailed in this manual.

   b. **Supply Pressure** required for this appliance is shown in the 'Specifications' Section of this manual. Check the gas supply to ensure adequate supply pressure exists.

   c. **Input Rate** of this appliance is stated on the Rating Plate and in the 'Specifications' section of this manual. The input rate should be checked against the available supply line capacity. **Particular note should be taken if the appliance is being added to an existing installation.**

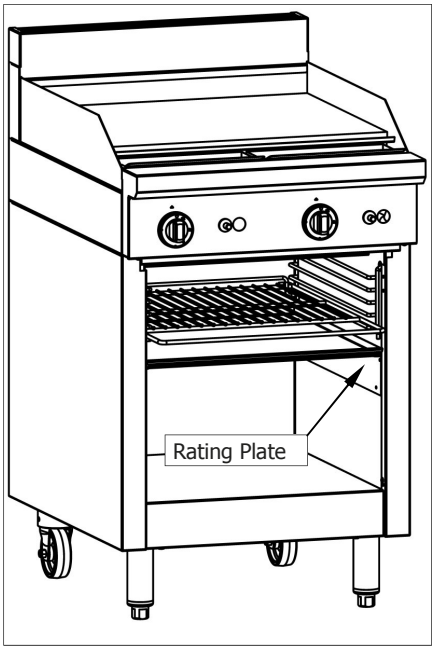

Figure 2.1a

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NOTE: It is important that adequately sized piping runs directly to the connection joint on the griddle toaster with as few tees and elbows as possible to give maximum supply volume.

3. Fit the gas regulator supplied, into the gas supply line as close to the appliance as possible.

NOTE: The gas pressure regulator provided with this appliance is convertible between Natural Gas and LPG and is already converted ex-factory to the gas type labelled beside the gas connection point. The <u>regulator outlet pressure is fixed ex-factory and it is NOT to be adjusted</u>.

The regulator connections are $^1/_2$" BSP female.

The connection to the appliance is $^1/_2$" BSP male.

(Refer to the 'Specifications' section for the gas supply location dimensions).

NOTE: A Manual Isolation Valve must be fitted to the individual appliance supply line.

1. Correctly locate the griddle toaster into its final operating position and using a spirit level, adjust the legs so that the appliance is level and at the correct height.
2. Connect the gas supply to the appliance. A suitable jointing compound which resists the breakdown action of LPG must be used on every gas line connection, unless compression fittings are used.
3. Check all gas connections for leakages using soapy water or other gas detecting equipment.

<u>WARNING</u>:

DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.

7. Check that the gas operating pressure is as shown in the 'Specifications' section.

NOTE: The operating pressure to be measured at the manifold test point and with all burners operating at the 'High Flame' setting.

8. Turn off the mains gas supply and bleed the gas out of the appliance gas lines.
9. Turn on the gas supply and the appliance.
10. Verify the operating pressure remains correct.

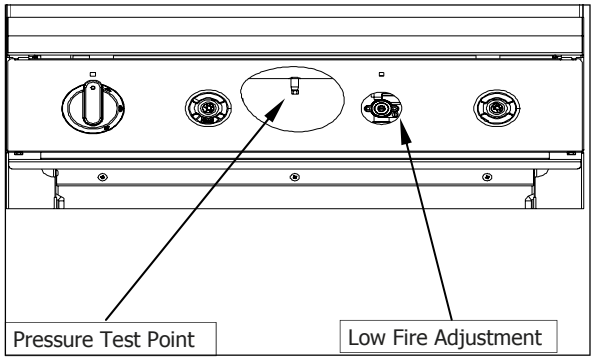

Figure 2.1b

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Commissioning

1. Before leaving the new installation;
    a. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of the User manual.
        - Light the Pilot Burner.
        - Light the Main Burners.
        - Check the Low Fire burner operation.
        - Check the High Fire burner operation.

    b. Ensure that the operator has been instructed in the areas of correct lighting, operation, and shutdown procedure for the appliance.

2. The User manual must be kept by the owner for future reference, and a record of ***Date of Purchase, Date of Installation*** and ***Serial Number of Appliance*** recorded and kept with the manual. **(These details can be found on the Rating Plate attached to the R/H side panel (refer to the 'Gas Connection' section).**

NOTE: If for some reason it is not possible to get the appliance to operate correctly, shut off the gas supply and contact the supplier of this appliance.

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NOTE: A full user's operation manual is supplied with the product and can be used for further referencing of installation, operation and service.

3.1 Description of Controls

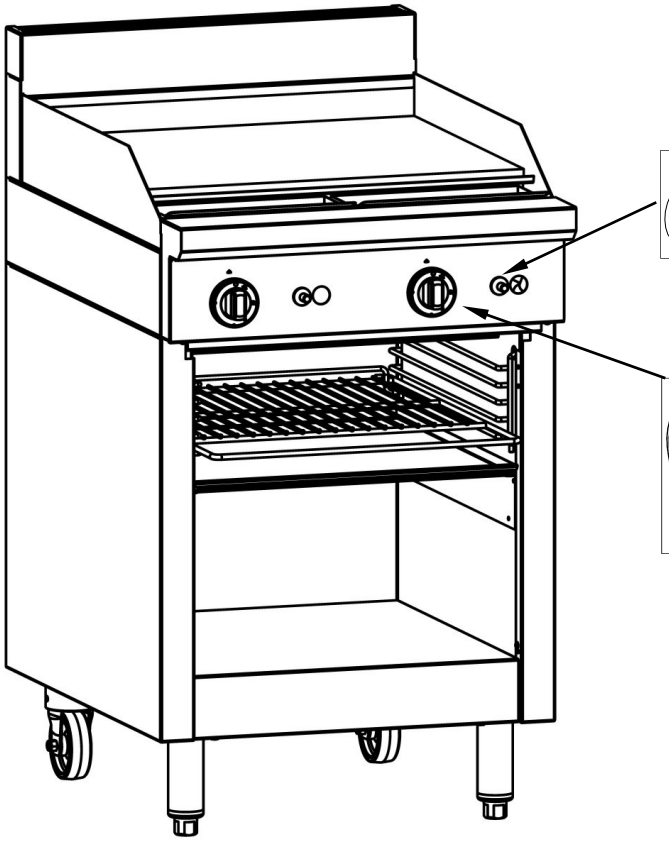

Figure 3.1a

Lighting the Pilot Burners

1. Depress the gas control knob and rotate anti-clockwise to the 'PILOT' position.
2. With the control knob depressed, press the piezo ignition button on the front control panel adjacent to the gas control knob until the pilot burner ignites. Pilot ignition can be viewed through openings in the control panel.
3. Hold in the gas control knob for approximately 10 seconds, then release. The pilot burner should remain alight. If not repeat Items 1 to 3.
4. Repeat Items 1 to 3 to light the second pilot burner.
5. 'FULL' flame can now be achieved by rotating the gas control knob anti-clockwise to the first stop.
6. 'LOW' flame can be achieved by depressing and rotating the gas control knob fully anti-clockwise.

Using the Griddle

1. Light the pilot burners as shown opposite.
2. Turn the gas controls to the 'FULL' flame position and allow the griddle plate to preheat for 10 minutes if starting from a cold start.
3. Place the product to be cooked onto the griddle plate.
4. For intermediate heat, position the gas control knob between the 'HIGH' and 'LOW' positions to achieve the desired heat.
5. During idle periods, the burners can be turned down to maintain an appropriate griddle plate temperature or the gas controls can be set to the 'PILOT' position as required.

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Using the Toaster

1. Light the pilot burners as shown above.
2. If starting from cold, set the burners to the 'FULL' flame position and allow 5 minutes preheat before commencing toasting.
3. Adjust the rack position to the desired height.
4. Place the product on the rack to toast.
5. Best toasting results are achieved using the shaded area of the toast rack as per the diagram below.

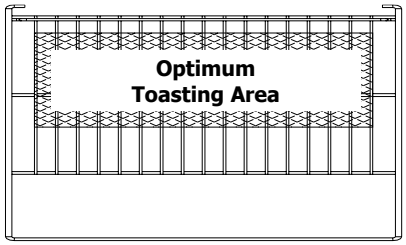

Figure 3.1b

6. With the main burners alight, the individually controlled burners can be operated to suit food quantity requirements.
7. Each burner is operated by an 'OFF' / 'PILOT' / 'HIGH' / 'LOW' gas control. The 'HIGH' position is recommended for most grilling, cheese melting functions and the 'LOW' position for a reduced heat setting.

3.2 Explanation of the Control System

Safety System

The purpose of the safety system is to shut off the flow of gas if the pilot flame goes out. It comprises, the flame itself, the thermocouple, and the flame failure gas valve.

The pilot flame is lit by holding in the gas control knob, which in turn temporarily pushes the plunger inside the safety valve open and allows gas to flow through.

Once the burner is lit, the thermocouple will begin to generate millivolts (after about 10 to 30 seconds of being heated) and will energize the electro-magnet inside the gas valve.

Once energized the electromagnet holds the plunger inside the gas valve in the open position. The plunger has to have been pushed all the way in for the electromagnet to be able to hold it in place.

If the burner flame goes out for some reason, the thermocouple will cool after about 10 to 30 seconds and stop generating millivolts. The electromagnet will then de-energize, and the plunger will snap shut, cutting off the flow of gas.

Detail of each component in the safety system is explained below.

Thermocouple

The thermocouple is a device that generates electricity when heat is applied to the tip.

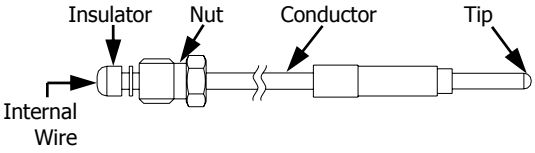

Figure 3.2a

The tip of the thermocouple is located in the pilot burner flame, and the nut at the other end of the thermocouple screws into the back of the gas valve.

Inside the copper tubing is a wire which is joined at the tip but insulated from the rest of the tubing. These two parts (the copper tubing and wire) make up the "wiring" for an electrical circuit. When these two dissimilar metals, wire and tip, are heated an electrical voltage is produced. This type of thermocouple generates between 7 and 30 millivolts when heated in the pilot flame.

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Electromagnetic Flame Failure Gas Valve

The purpose of the safety valve is to shut off the flow of gas if the pilot flame goes out.

Inside the body of the gas valve is an electromagnet connected to a spring loaded plunger. When the electromagnet is energized, it holds the plunger in, allowing gas to flow through the valve. When the electromagnet is de-energized, the plunger snaps to the closed position, stopping the flow of gas.

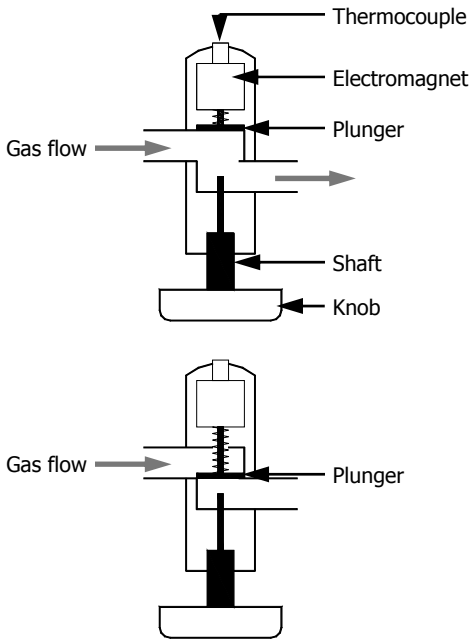

Figure 3.2b

Millivolts are provided to the electromagnet by the thermocouple (not shown) which generates millivolts when heated. The thermocouple screws into a fitting at the back of the gas valve to make an electric connection.

By pressing in the gas control knob, the plunger can be temporarily held open while lighting.

There are two reasons for this;-

a. Gas has to flow through the safety valve to make it possible to light the pilot burner.

b. The plunger has to be pushed all the way in for the electromagnet to hold it in. i.e. The electromagnet is strong enough to hold the plunger in once there, but is not strong enough to pull it in by itself.

Sometimes a problem with the flame not staying lit after releasing the button can be attributed to not pushing the plunger all the way in.

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4 Cleaning / Maintenance

General

CAUTION:

Always turn off the gas supply at the main gas supply before cleaning. This appliance is not water proof. Do not use water jet spray to clean interior or exterior of this appliance.

- To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly.
- Don't wait until they cause a complete breakdown. It is recommended that the appliance is serviced every 6 months.
- Clean the griddle toaster regularly. A clean appliance looks better, will last longer and will perform better. Carbonised grease on the surface or on the griddle plate will hinder the transfer of heat from the cooking surface to the food. This will result in loss of cooking efficiency.

DO NOT use water on the griddle plate while this item is still hot as warping and cracking may occur. Allow the griddle plate to cool down before cleaning.

NOTE:

- **DO NOT use abrasive detergents, strong solvents or caustic detergents as they could corrode or damage the griddle toaster.**
- **In order to prevent the forming of rust on the griddle plate (Steel Plate), ensure that any detergent or cleaning material has been completely removed after each cleaning. The appliance should be switched on briefly to ensure the griddle plate becomes dry. Oil or grease should be spread over the griddle surface in order to form a thin protective greasy film.**

To keep your griddle toaster clean and operating at peak efficiency, follow the procedures shown:-

After Each Use

CAUTION:

Always ensure that an even pressure is applied over the whole surface of the scraper tool when using on the flat surface of the griddle toaster, to prevent scoring of the surface.

NEVER bang the sharp edge of the scraper tool on the flat surface of the griddle as this will damage the finish and invalidate the warranty.

1. Clean the griddle with a scraper tool to remove any food debris.
2. Always ensure that the scraper tool blades are changed regularly to ensure that the scraper tool works efficiently and prevents damage to the griddle plate surface.

Daily Cleaning

1. The crumb tray / grease drawer should be checked and emptied frequently to prevent overflow and spillage. Remove the grease drawer while still warm so that the grease is in a liquid state. Empty any grease from the drawer and wash thoroughly in the same manner as any cooking utensil.
2. Remove the crumb tray and empty out the contents. Wash thoroughly in the same manner as any cooking utensil.
3. Thoroughly clean the splash back, the interior and exterior surfaces of the range with hot water, a detergent solution and a soft scrubbing brush.
4. Brush the griddle surface with a soft bristled brush. Any carbon deposits should be removed using the supplied scraper tool followed by wiping with a cloth to prevent accumulation of food deposits.
5. Dry the griddle toaster thoroughly with a dry cloth and polish with a soft dry cloth.

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Weekly Cleaning

NOTE:

- **If the griddle toaster usage is very high, we recommend that the weekly cleaning procedure is carried out on a more frequent basis.**
- **Ensure that protective gloves are worn during the cleaning process.**
- **DO NOT use harsh abrasive detergents, strong solvents or caustic detergents as they will damage the griddle toaster and burners.**
- **DO NOT use water on the griddle plate while it is still hot as warping may occur. Allow these items to cool and remove for cleaning.**

Griddle Plate

NOTE:
In order to prevent the forming of rust on the griddle plate, ensure that all detergent and cleaning material has been entirely removed after each cleaning process. The appliance should be switched on briefly to ensure the griddle plate becomes dry. Oil or grease should be spread over the griddle surface in order to form a thin protective greasy film.

a. Remove and clean the grease collection drawer frequently to prevent over spills.
b. Remove the crumb tray frequently to prevent overfilling the crumb tray.
c. Clean the griddle surface thoroughly with the supplied scraper tool or a wire brush. Use a griddle stone or a scotch bright pad on the griddle surface for the removal of stubborn or accumulated carbon deposits.
d. Occasionally bleach the griddle plate with vinegar when the plate is cold.
e. Clean with hot water, a mild detergent solution and a scrubbing brush. Dry all components thoroughly with a dry cloth.
f. The griddle plate should be switched on briefly to ensure that the griddle plate becomes dry. A thin smear of cooking oil should be spread over the griddle plate to form a protective film.

Grilling / Toasting Area

a. Clean the grilling / toasting area with a soft cloth, a mild detergent and a hot water solution.
b. Baked on deposits or discolouration may require a good quality stainless steel cleaner or stainless steel wool. Always apply cleaner when the appliance is cold and rub in direction of the grain.
c. Remove the grease drawer and crumb tray, clean with a mild anti bacterial detergent and hot water solution using a soft bristled brush. Dry the grease drawer and crumb tray thoroughly with a dry cloth.

Stainless Steel Surfaces

a. Clean the exterior surfaces of the griddle toaster with hot water, a mild detergent solution and a soft scrubbing brush. Note that the gas control knobs are a push fit onto the gas control valve spindles and can be removed to allow cleaning of the front control panel.
b. Baked on deposits or discolouration may require a good quality stainless steel cleaner or stainless steel wool. Always apply cleaner when the appliance is cold and rub in the direction of the grain.
c. To remove any discolouration, use an approved stainless steel cleaner or stainless steel wool. Always rub in the direction of the grain.
d. Dry all components thoroughly with a dry cloth and polish with a soft dry cloth.

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COBRA GAS GRIDDLE TOASTER - MAINTENANCE SCHEDULE

Business Name and Address:	
Date:	Service Report No:
Phone:	Fax:
	Serial No:
Clients Order No:	Serviceman:

Model:		✓	Remarks
1	Inspect exterior condition of the unit.		
2	Check working gas pressure is correct to figures shown on rating plate.		Pressure_____ kPa.
3	Check pilot flames / correct size.		
4	Check that all burner ports light. Clear any blockages, if any.		
5	Check burner aeration shutters are adjusted to achieve correct flame.		
6a	Inspect thermocouples.		
6b	Replace thermocouples (every 12 months).		
7	Check injectors are clean and free from blockages.		
8	Re-grease gas cocks.		
9	Check for tightness of gas connections.		
10	Check for gas leaks.		
11	Check the piezo ignition of pilots functions correctly.		

Service Comments:

Additional work / repairs required:

Customers approval:
Name (print): Title:
Customers signature: Date:

Suggestion: Photocopy this form and keep on file for continued use.

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CAUTION:

All installation and service repair work must be carried out by qualified persons only.

5.1 Fault Finding Table

Fault	Possible Cause	Remedy
Pilot will not light.	No gas supply.	Ensure gas is connected and turned 'On'. (bottles not empty).
	Knob on gas control will not push fully in.	Remove obstruction.
	Gas pressure too low.	Adjust gas supply pressure. **(Refer 'Specification' Section).**
	Blocked pilot injector.	Clean or replace pilot injector. **Refer 'Service' Section 6.2.2).**
	Faulty gas control valve.	Replace gas control valve. **(Refer 'Service' Section 6.2.6).**
Pilot flame small.	Gas pressure too low.	Adjust gas supply pressure. **(Refer 'Specification' Section).**
	Pilot injector restricted.	Clean or replace pilot injector. **(Refer 'Service' Section 6.2.2).**
Pilot goes out when knob released.	Releasing knob before the thermocouple has heated.	Hold control in for longer (30secs), see if pilot will stay lit.
	Pilot flame too small. **(Refer Fault: Pilot Flame Small).**	Correct fault.
	Thermocouple faulty. **(Refer Fault Diagnosis 5.2.1)**	Replace thermocouple. **(Refer 'Service' Section 6.2.1).**
	Electromagnet in gas valve faulty. **(Refer Fault Diagnosis 5.2.1)**	Replace electromagnet. **(Refer 'Service' Section 6.2.6).**
Pilot flame yellow / lazy.	Gas pressure incorrect.	Adjust gas supply pressure. **(Refer 'Specification' Section).**
	Restriction in pilot injector or aeration shutter.	Clean or replace as required. **(Refer 'Service' Section 6.2.2 and 6.2.5).**
Pilot goes out when main burner comes on.	Incorrect gas pressure.	Adjust gas supply pressure. **(Refer 'Specification' Section)**
	Faulty gas control valve.	Replace gas control valve. **(Refer 'Service' Section 6.2.6).**

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5 Fault Finding

Fault	Possible Cause	Remedy
Pilot goes out during operation	Draught at installation (blowing pilot out). Gas supply—incorrect or fluctuating pressure. Thermocouple faulty. **(Refer Fault Diagnosis 5.2.1)** Electromagnet in gas valve faulty. **(Refer Fault Diagnosis 5.2.1)**	Shield griddle toaster from excessive breeze. Adjust gas supply pressure. **(Refer Specifications Section).** Replace thermocouple. **(Refer Service Section 6.2.1).** Replace electromagnet. **(Refer Service Section 6.2.6).**
Main burners will not light	Incorrect supply pressure. Small pilot flame. **(Refer Fault: Small Pilot Flame)** Faulty thermopile. Wrong size or blocked injectors. Faulty gas control valve.	Check supply pressure is correct Correct fault. Replace thermocouple. **(Refer Service Section 6.2.1).** Replace / clean injectors. **(Refer Service Section 6.2.5).** Replace gas control valve. **(Refer Service Section 6.2.6).**

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5.2 Fault Diagnosis

5.2.1 Pilot Drops Out

Thermocouple Faulty

Check that the thermocouple connection to the gas control is firm. Tighten if necessary.

Disconnect the thermocouple from the gas control valve. Light the pilot, and whilst holding the control knob in (to keep the pilot alight), measure the voltage generated between the end of the thermocouple and earth (eg the valve body). A good thermocouple should generate 20-30mV. If the thermocouple is giving less than 10mV, then it is faulty—replace.

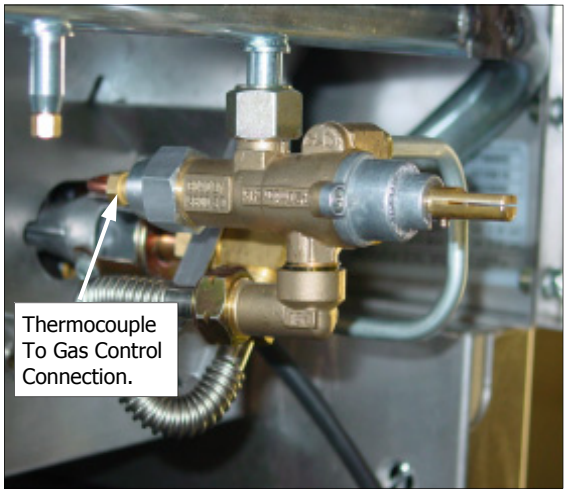

Figure 5.2.1

Gas Magnet Faulty

If the thermocouple is generating a sufficient voltage, but the pilot light still will not hold, then the electromagnet in the rear of the gas control may be faulty—replace. (Refer to service section 6.2.6).

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6 Service Procedures

WARNING:

- **ENSURE THAT THE GAS SUPPLY IS SWITCHED 'OFF' BEFORE COMMENCING SERVICING.**
- **ALWAYS CHECK / TEST FOR GAS LEAKS ON COMPLETION OF SERVICING REPAIRS ON THE GAS SYSTEM.**

CAUTION:

All installation and service repair work must be carried out by qualified persons only.

Section **Page Number**

6.1 Access 17

6.1.1 Control Panel 17

6.2 Replacement 17

6.2.1 Thermocouple 17
6.2.2 Pilot Injector 17
6.2.3 Pilot Burner 18
6.2.4 Main Burners 18
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6.1 Access

6.1.1 Control Panel

1) Remove control knobs.
2) Remove two bolts from the underside of the control panel. The control panel can now be pulled out at the bottom and lifted off the top locating tags.
3) Disconnect HT leads from the rear of the piezo igniters attached to the control panel.

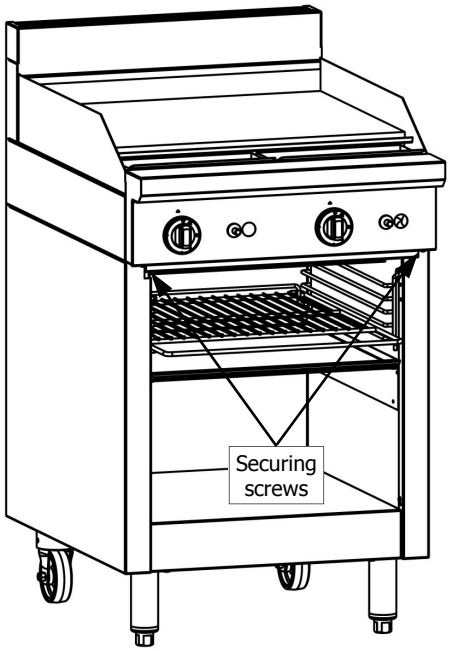

Figure 6.1.1

6.2 Replacement

6.2.1 Thermocouple

1) Remove the control panel (refer 6.1.1)
2) Disconnect the thermocouple and pilot supply tube from the gas control valve.
3) Remove two screws securing the pilot bracket and remove the pilot assembly.
4) Remove and replace the thermocouple from the pilot assembly.
5) Re-assemble in reverse order.

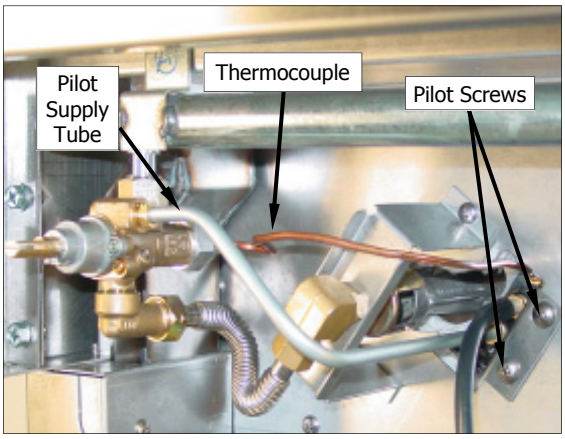

Figure 6.2.1

6.2.2 Pilot Injector

1) Remove the control panel (refer 6.1.1)
2) Disconnect pilot supply tube and thermocouple from the gas control valve and pilot assembly.
3) Unscrew the 2 screws securing the pilot assembly to the griddle toaster. Remove the pilot assembly.
4) The pilot injector can now be removed from the pilot assembly and replaced.

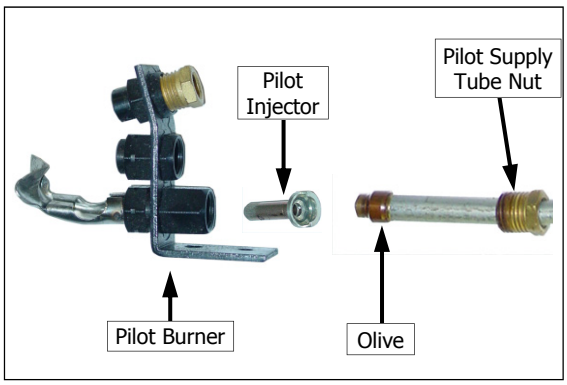

Figure 6.2.2

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6.2.3 Pilot Burner

1) Remove the control panel (refer 6.1.1).
2) Disconnect the thermocouple and pilot supply tube from gas control valve.
3) Remove two screws securing pilot bracket, remove pilot assembly.
4) Transfer supply tube, thermocouple and electrode to new pilot assembly.
5) Re-assemble in reverse order.

Figure 6.2.3

6.2.4 Main Burners

1) Remove the rack from inside the toaster.
2) Reach in and remove the wing nut securing the rear of each burner.
3) Lift the burner up at rear, push backward and then drop out.
4) Re-assemble in reverse order.

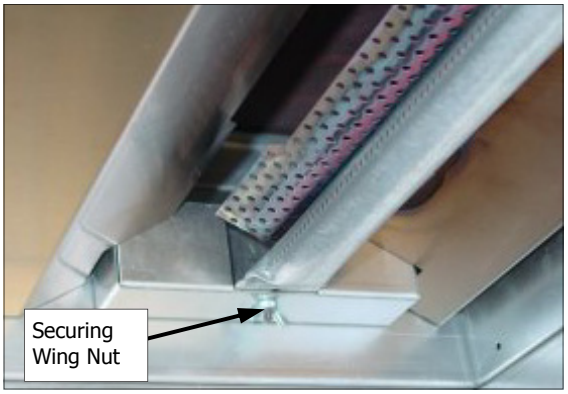

Figure 6.2.4a

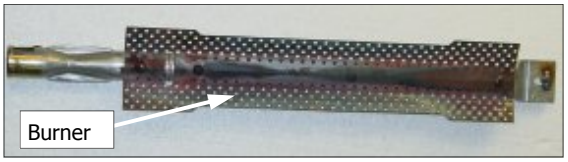

Figure 6.2.4b

6.2.5 Main Burner Injectors

1) Remove the control panel (refer 6.1.1).
2) Remove burner (refer 6.2.4).
3) Unscrew injector from support bracket.
4) Re-assemble in reverse order.

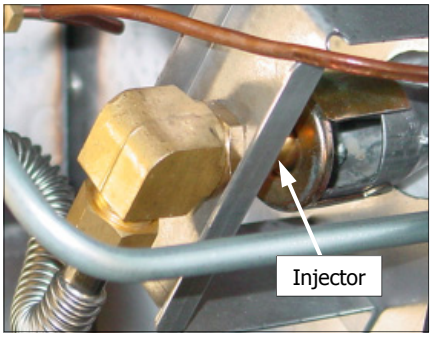

Figure 6.2.5

6.2.6 Gas Control Valve

1) Remove the control panel (refer 6.1.1).
2) Disconnect the thermocouple and gas supply tubes from the gas control valve.
3) Unscrew the gas control valve from gas supply manifold and remove the gas control valve.

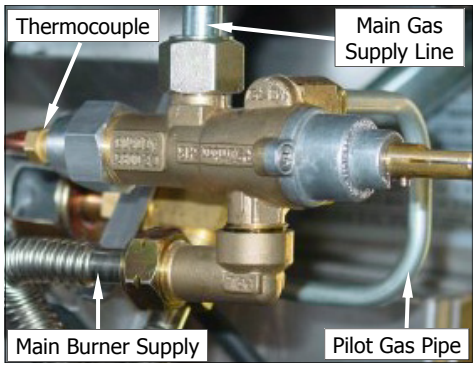

Figure 6.2.6a

4) To replace the gas magnet in the rear of the gas control valve, with the thermocouple removed from the rear of the valve, remove the large aluminium nut on the rear of the valve and withdraw the magnet from the gas control valve. Replace.
5) Re-assemble in reverse order.

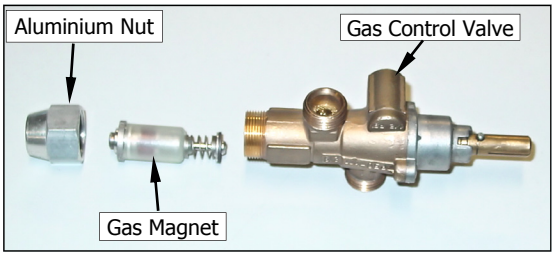

Figure 6.2.6b

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6.3 Adjustment / Calibration

6.3.1 Gas Control Valve Re-Greasing

1) Remove the gas control valve (refer 6.2.6).
2) Remove 2 screws holding shaft plate to gas control body and remove the control shaft and plate. Note the orientation of the shaft for correct re-assembly.

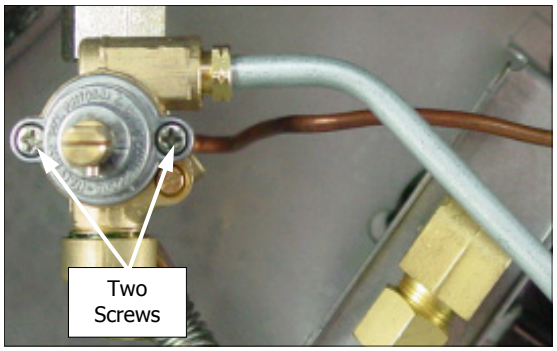

Figure 6.3.1a

3) Using needle nose pliers or similar, pull out the gas control spindle, again noting its orientation.

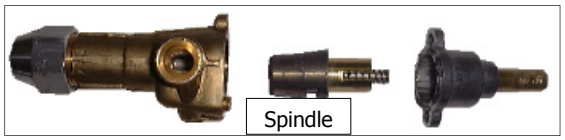

Figure 6.3.1b

4) Apply a suitable high temperature gas cock grease or lubricant such as ROCOL - A.S.P (Anti scuffing paste) to the outside of the spindle.
5) Replace spindle and re-assemble the gas control valve in reverse order.

6.3.2 Low Fire Screw Adjustment

1) Remove the control panel (refer 6.1.1).
2) With the burner running and the gas control in the low fire position, adjust the low fire screw to give the desired flame.
3) Re-assemble in reverse order.

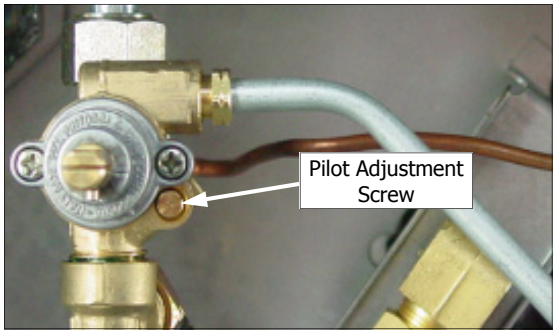

Figure 6.3.2

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GAS CONVERSION KITS INDEX

AU, NZ, XP Models Only

MODEL TYPE	CONVERT TO	CONVERSION KIT
CT6 GAS GRIDDLE TOASTER	LPG	231554
	NAT	231553
	BUTANE	231555
	TOWNS	231578

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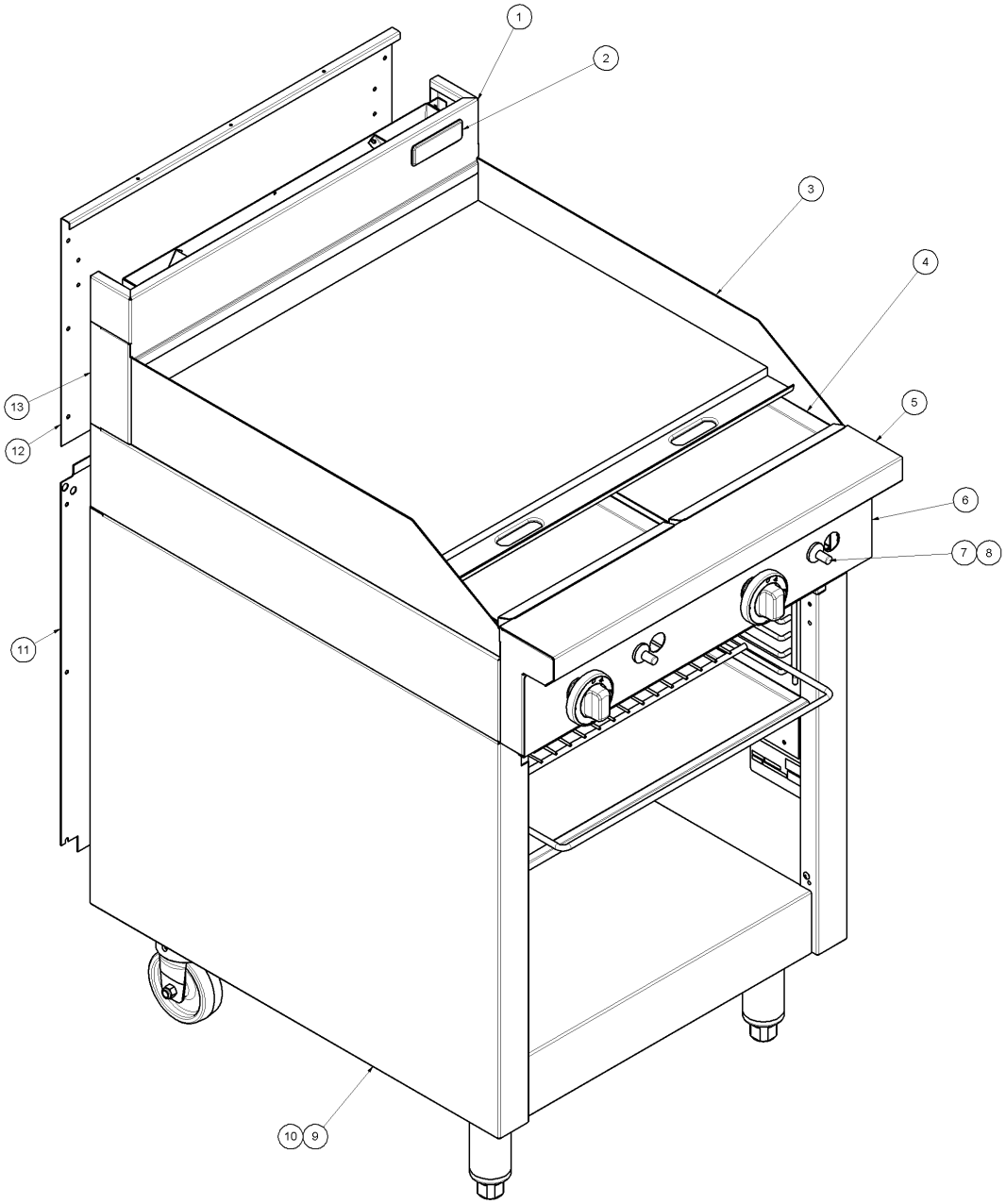
8.1 CT6 Main Assembly



Item	Part No.	Description
1	230269	SPLASHBACK
2	230587	COBRA BADGE
3	229999	GRIDDLE PLATE WA
4	230289	GREASE TRAY
5	230584	NOSE RAIL WA COBRA
6	230515	CONTROL PANEL
7	230586	PIEZO IGNITOR
8	228407	HT LEAD 250 mm
9	227046	SIDE PANEL LH
10	227047	SIDE PANEL RH
11	227040	BACK PANEL
12	227794	BACK PANEL
13	227801	SPLASHBACK END

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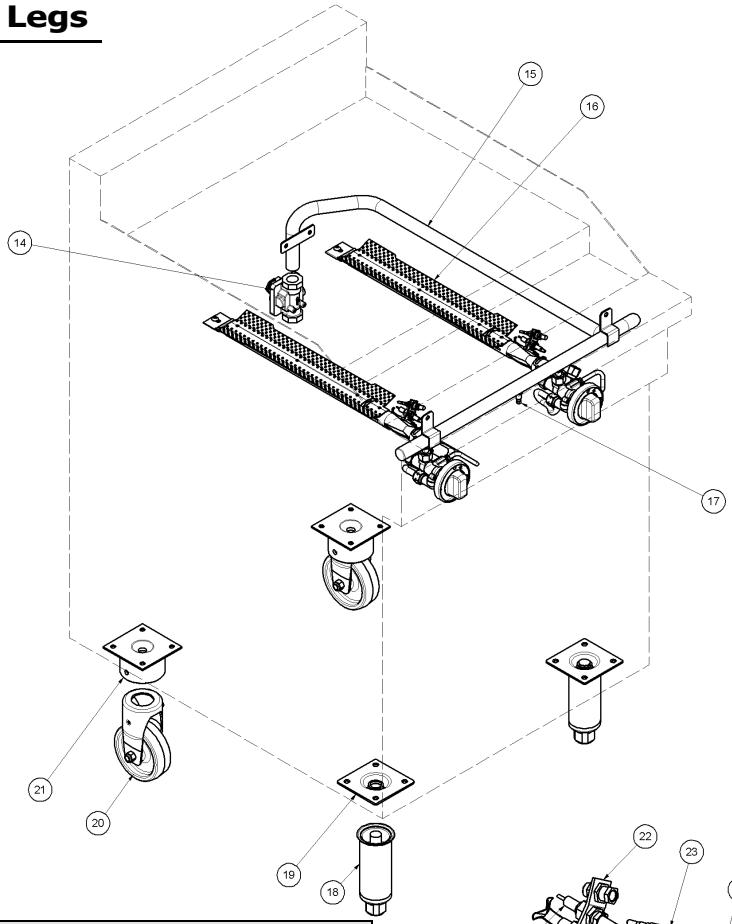
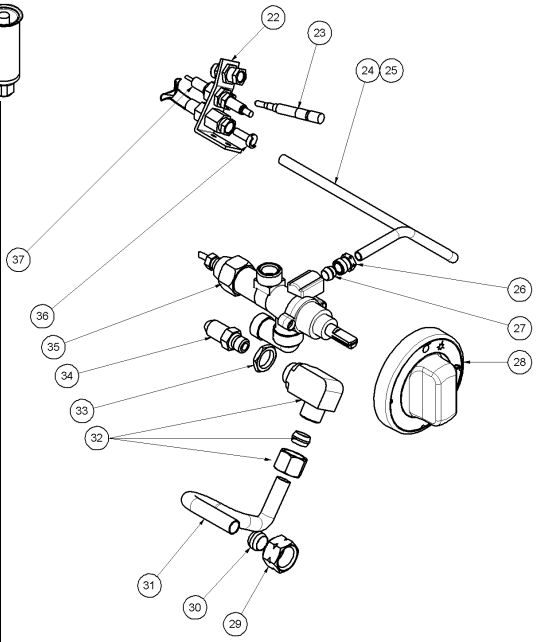
8.2 CT6 Burners / Legs





Item	Part No.	Description
14	228533	REGULATOR 1/2" CONVERTIBLE
15	230264	MANIFOLD WA
16	231558	BURNER G-TOASTER C/W FRET
17	026060	PRESSURE TEST SCREW PLUG
18	230578	LEG 2 INCH ASSEMBLY COBRA
19	230577	LEG MTG PLATE COBRA
20	229674	REAR ROLLER ASSEMBLY
21	229671	LEG RING PLATE THREADED
22	019215K	PILOT BURNER KIT
23	019428	THERMOCOUPLE 320 mm M9x1
24	227431	PILOT SUPPLY PIPE LH
25	227429	PILOT SUPPLY PIPE RH
26	017805	NUT PILOT 1-4IN 017805
27	011286	OLIVE 60X4 1-8IN BRASS 011286
28	230608	KNOB BBQ - TOASTER
29	018978	COMPRESSION NUT 16MM-3/8" STEEL
30	015153	OLIVE 60X6 3/8" BRASS
31	022686	FLEXTUBE DORMONT T6
32	229511	INJECTOR ELBOW X 3/8"
33	025093	LOCK NUT M14x1
34	037210	INJECTOR 2.10 mm NAT
	037130	INJECTOR 1.30 mm LPG
	037120	INJECTOR 1.20 mm BUTANE
35	227403	GAS VALVE 21S CW 3-8 ELBOW
36	026488	PILOT INJECTOR - NAT 0.35 mm
	019217	PILOT INJECTOR - LPG 0.23 mm
37	018744	ELECTRODE

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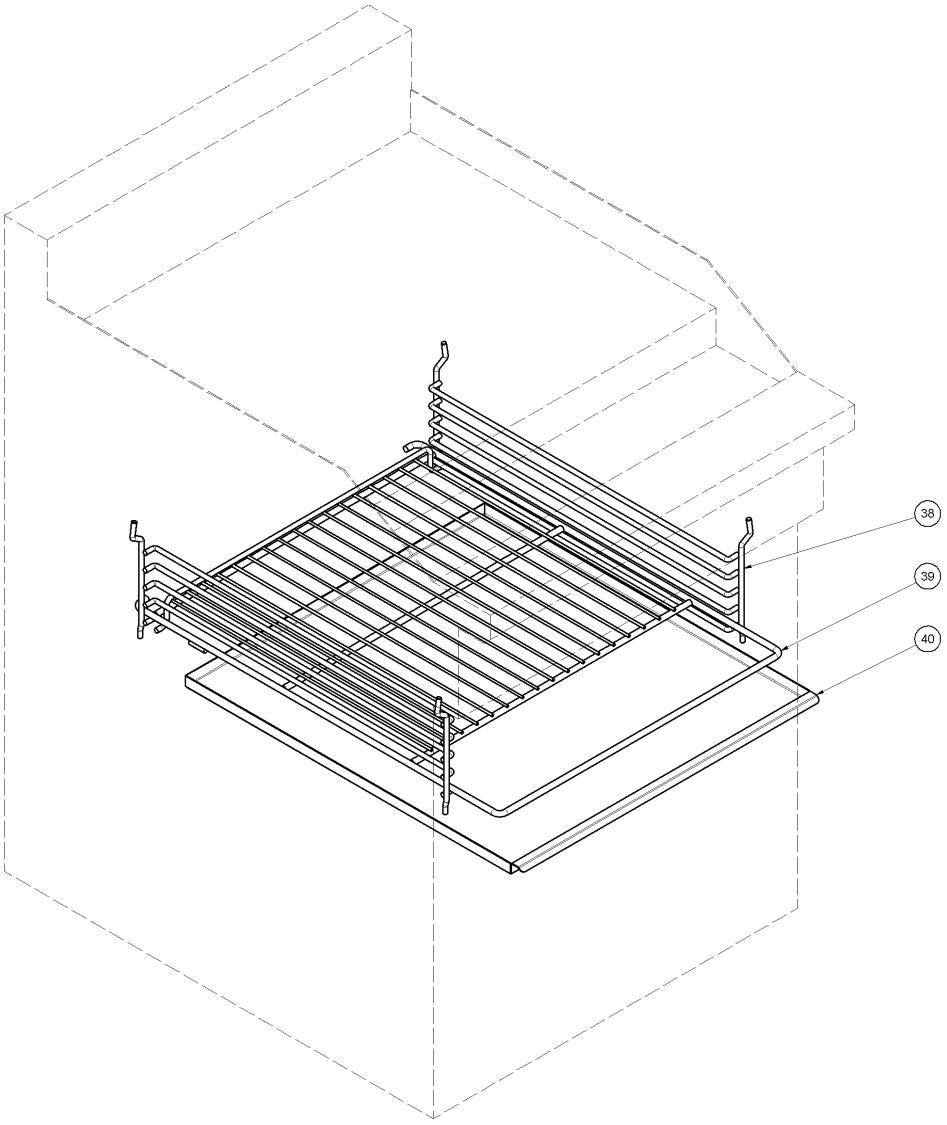
8.3 CT6 Racks



Item	Part No.	Description
38	227006	SIDE RACK
39	227007	TOASTING RACK
40	229987	CRUMB TRAY

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9 Service Contacts

Australia

VICTORIA - MOFFAT PTY
HEAD OFFICE AND MAIN WAREHOUSE
740 Springvale Road
Mulgrave VIC 3170
Spare Parts Department

Tel (03) 9518 3888
Fax (03) 9518 3838
Free Call 1800 337 963
Fax (03) 9518 3895

NEW SOUTH WALES - MOFFAT PTY
Unit 3/142 James Ruse Drive
Rosehill NSW 2142
Spare Parts

Tel (02) 8833 4111

Free Call 1800 337 963
Fax (03) 9518 3895

QUEENSLAND - MOFFAT PTY
30 Prosperity Place
Geebung QLD 4034
Spare Parts

Tel (07) 3630 8600

Free Call 1800 337 963
Fax (03) 9518 3895

WESTERN AUSTRALIA - MOFFAT PTY
67 Howe St
Osbourne Park, WA 6017
Spare Parts

Tel (08) 9202 6820
Fax (08) 9202 6836
Free Call 1800 337 963
Fax (03) 9518 3895

NATIONAL COVERAGE FOR 24 HOUR SERVICE OR MAINTENANCE DIAL

FREE CALL 1800 622 216 (AUSTRALIA ONLY)

Canada

SERVE CANADA
22 Ashwarren Rd
Downview
Ontario M3J1Z5

Tel 416-631-0601
Fax 416-631-0315

New Zealand

CHRISTCHURCH - MOFFAT LTD
16 Osborne St
PO Box 10-001
Christchurch
Spare Parts

Tel (03) 389 1007
Fax (03) 389 1276

Free Call 0800 MOFFAT
(0800 66 33 28)
Fax (03) 381 3616

AUCKLAND - MOFFAT LTD
4 Waipuna Road
Mt Wellington
Auckland
Spare Parts

Tel (09) 574 3150
Fax (09) 574 3159

Free Call 0800 MOFFAT
(0800 66 33 28)

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United Kingdom

BLUESEAL LTD
Units 67
Gravelly Industrial Park
Gravelly Park, Erdington
Birmingham B24 8TQ
England

Tel 0121 327 5575
Fax 0121 327 9711

United States of America

MOFFAT INC.
3765 Champion Blvd
Winston-Salem
NC27115

Tel 1800 551 8795
Fax 336 661 9546

NATIONAL COVERAGE FOR SERVICE OR MAINTENANCE DIAL

FREE CALL 1800 551 8795 (USA ONLY)

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Gas Conversion Procedure

CAUTION:

Ensure that the unit is isolated from

NOTE:

- **These conversions should only be carried out by qualified service persons. All connections must be checked for leaks before re-commissioning the appliance.**
- **For all relevant gas specifications refer to the table at the end of this section.**

Main Burners

1. Ensure that the gas supply has been turned 'Off' at the main supply.
2. Remove control panel and toasting rack.
3. Unscrew the wing nut at the rear of burner and lift out the burner.

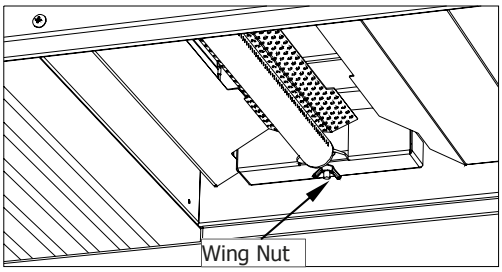

Figure A.1

4. Determine correct injector sizes for the corresponding gas from the table shown in the 'Gas Specifications' section.
5. Remove the main injectors from the injector support bracket.
6. Replace with the correct size injectors.

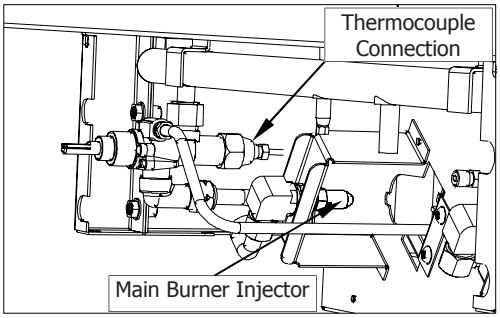

Figure A.2

7. Repeat for the second main burner.
8. Refit the main burners to the griddle toaster.

Pilot Burners

1. Disconnect pilot supply and thermocouple tubes from the gas control valve.
2. Undo the 2 screws securing the pilot assembly to the griddle toaster main frame.

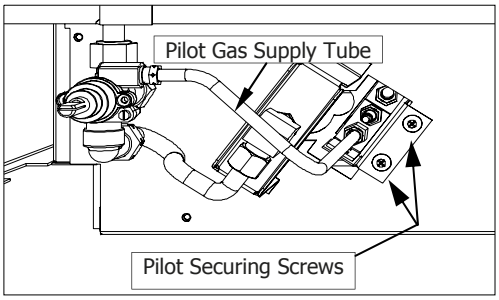

Figure A.3

3. Withdraw the pilot assembly, remove the existing pilot injectors and replace with the correct size injectors.
4. Repeat for the second pilot burner.
5. Re-assemble the pilot burners to the griddle toaster.
6. Refit the main control panel.

Low Fire Adjustment

1. Set the burner low fire adjustment. The low fire screw on the gas control valve should be screwed fully 'In', then unscrewed by the measurement shown in the 'Gas Specifications' table at the end of this section.

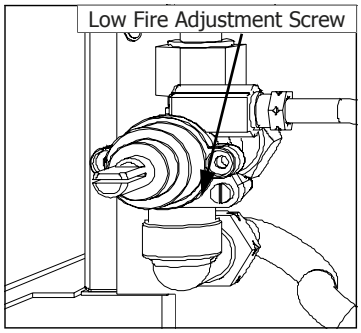

Figure A.4

NOTE:

The 'Low Fire Adjustment Screw' should be sealed with coloured paint on completion of the low fire adjustment.

2. Refit the front control panel and secure in position by tightening the 2 screws on the front lower edges of the control panel.
3. Refit the gas control knobs to the gas control valves. The gas control knobs are a push fit onto the shaft of the gas control valves.

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Gas Regulator

- NAT Gas / LPG / Butane Only.

NOTE:

The regulator supplied is convertible between Natural Gas and LP Gas, but it's outlet pressure is fixed ex-factory and is NOT to be adjusted.

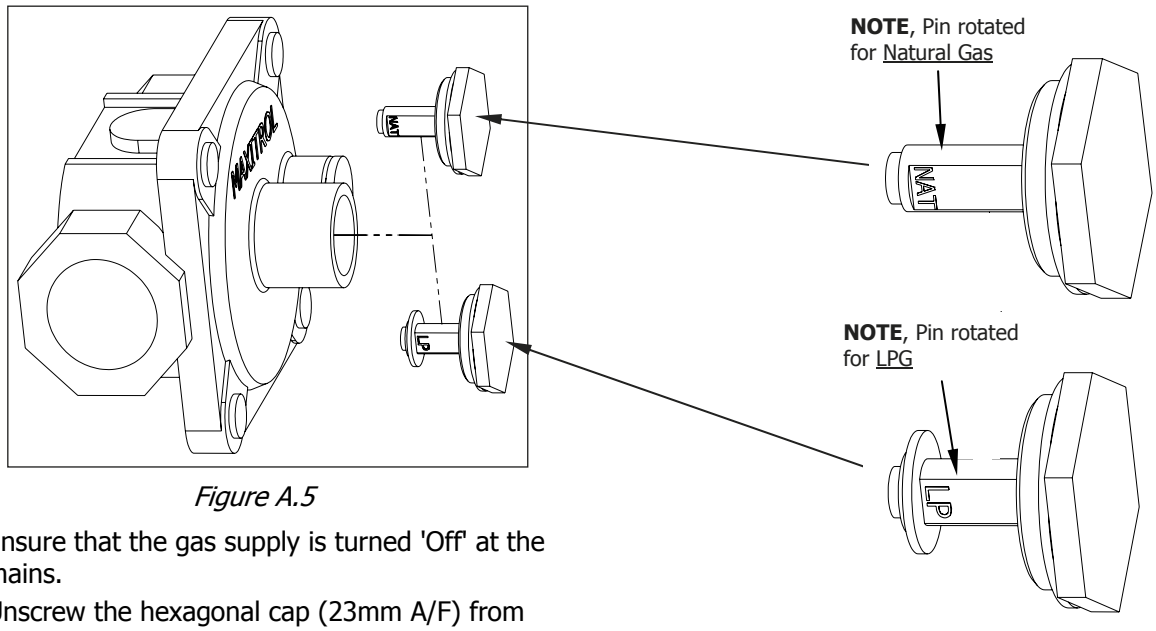

Figure A.5

1. Ensure that the gas supply is turned 'Off' at the mains.
2. Unscrew the hexagonal cap (23mm A/F) from the regulator.
3. Un-clip the plastic pin from the cap, reverse the pin and re-fit it back to the cap the correct way for the gas type to be used. **(Either 'LP' or 'NAT' should be visible on the flank of the pin once re-fitted to the cap)**.
4. Screw the cap back into the regulator hand tight only.

- Town Gas Only.

1. Unscrew and remove the slotted cap from the regulator.
2. Turn on the gas supply and the appliance.
3. Adjust the pressure adjusting nut to achieve the correct burner operating pressure.

NOTE:

The operating pressure to be measured at the manifold test point and with both burners operating at the 'High Flame' setting.

4. Turn 'Off' the mains gas supply and bleed the gas out of the appliance gas lines.
5. Turn 'On' the gas supply and the appliance.
6. Verify the operating pressure remains correct (Re-adjust the regulator if required).
7. Screw the cap nut back onto the regulator.

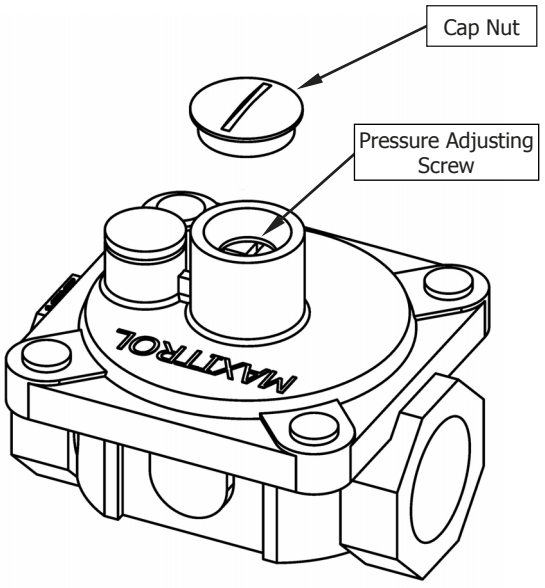

Figure A.6

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A Appendix A: Gas Type Conversion

Gas Type Identification Label

On completion of the gas conversion, replace the gas type labels located at:-

- The rear of the unit, above the gas connection.
- Beside the rating plate.

NOTE: If for some reason it is not possible to get the appliance to operate correctly, shut off the gas supply and contact the supplier of this appliance.

Commissioning

WARNING:

DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.

Before leaving the converted installation;

1. Check all gas connections for leakages using soapy water or other gas detecting equipment.
2. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
    - Light the Pilot Burners.
    - Light the Main Burners.
    - Check the Low Fire Burner Operation.
    - Check the High Fire Burner Operation.
    - Ensure that all the Controls operate correctly.
    - Ensure that the Operating Pressure remains correct.

NOTE: If for some reason it is not possible to get the appliance to operate correctly, shut 'Off' the gas supply and contact the supplier of this appliance.

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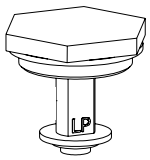
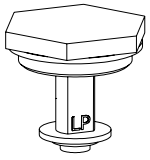
Gas Specifications

- Non UK Only:

	Natural Gas	LP Gas (Propane)	Butane Gas	Town Gas
Main Burner Injectors	Ø 2.10mm	Ø 1.30mm	Ø 1.20mm	Ø 3.80mm
Pilot Burner Injectors	0.35	0.23		0.60
Low Fire Adjustment	1 turn out (c.c.w.)	½ turn out (c.c.w.)		2 turns out (c.c.w.)
Operating Pressure	1.0 kPa (*)	2.5 kPa (*)		0.63 kPa (*)
Main Burner Aeration Shutter	Fully Open	Fully Open		Fully Open
Gas Regulator Cap Screw				Adjustable Regulator (Adjust to the Burner Operating Pressure)

- UK Only:

	Natural Gas (G20)	Propane (G31)
Main Burner Injectors	Ø 2.10mm	Ø 1.30mm
Pilot Burner Injectors	0.35	0.23
Low Fire Adjustment	1½ turns out (ccw)	½ turn out (ccw)
Operating Pressure	10 mbar (*)	26 mbar (*)
Main Burner Aeration Shutter	Fully Open	Fully Open
Gas Regulator Cap Screw		

(*)NOTE:

- **The burner operating pressure is to be measured at the manifold test point with both burners operating at the 'High Flame' setting.**
- **NAT, LPG & Butane Only - The operating pressure is ex-factory set and is not to be adjusted, apart from when converting between gasses, if required.**
- **TOWN GAS Only - The burner operating pressure is to be adjusted using the Town Gas adjustable gas regulator supplied.**
- **Refer to the 'Gas Conversion and Specifications' section of this manual for further details.**

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B Appendix B: Equipment Design Changes

Equipment Design Changes

Date	Change Info.	Equip. Ser. No.	Description of Change

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